1: Biochim Biophys Acta. 2000 Nov 15;1502(3):337-50. Related Articles, Links

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# Ovarian tumor cells express a novel multi-domain cell surface serine protease.

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Serine proteases serve many functions in normal biological processes. These functions are often usurped by cancer cells to allow progression of tumors by increasing the growth and metastatic potential of the neoplasia. Here, we have used a polymerase chain reaction (PCR)-based strategy to clone Tumor Associated Differentially-expressed Gene-12 (TADG-12), a new serine protease from ovarian carcinoma. This technique also revealed a variant splicing form of TADG-12 that could lead to a truncated protein product. Semi-quantitative PCR showed that TADG-12 is overexpressed in 41 of 55 ovarian cancer specimens relative to normal expression, and the variant form, TADG-12V is found at increased levels in 8 of 22 carcinomas examined. Northern blot revealed three transcripts, the largest of which is approximately 2.4 kb. An ovarian tumor cDNA library was screened, and the entire cDNA of TADG-12 has been identified. This sequence encodes a putative protein of 454 amino acids which includes a potential transmembrane domain, an LDL receptor-like domain, a scavenger receptor cysteine-rich domain, and a serine protease domain. These features imply that TADG-12 will be at the cell surface, and it may be useful as a molecular target for therapy or a diagnostic marker.

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